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(54) **TRACTOR/TRAILER WHEEL COVER**

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B60B 7/08	(2006.01)
B60B 7/00	(2006.01)

(52) **U.S. Cl.**

CPC ***B60B 7/066*** (2013.01); ***B60B 7/0013*** (2013.01); ***B60B 7/08*** (2013.01); *B60B 2900/1216* (2013.01); *B60B 2900/211* (2013.01)

(58) **Field of Classification Search**

CPC B60B 7/08; B60B 7/061; B60B 7/066; B60B 7/0013; B60B 2900/211; B60B 2900/1216; B60B 7/00; B60B 7/06; B60B 7/068

USPC 301/37.102, 37.101, 37.31, 37.34, 301/37.376

See application file for complete search history.

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(57) **ABSTRACT**

The present invention provides a wheel cover for use to cover the wheel of a tractor or trailer. The wheel cover includes an inner support section and an outer main section. The outer main section includes a wheel cover surface and an outer edge. Further, the wheel cover includes a ratchet assembly comprising a spring, a support block, an operating holder and an extension. When installed on a truck wheel, the ratchet extension engages an outer radial edge of the inner support section that is installed on a wheel hub.

9 Claims, 4 Drawing Sheets

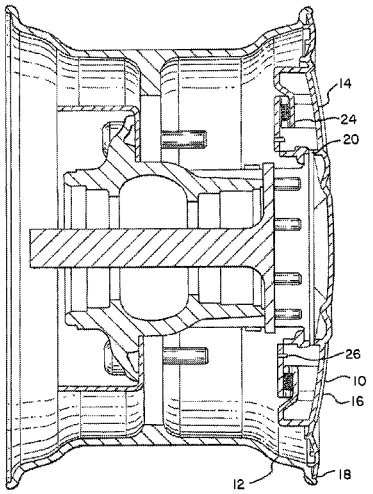

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FIG. 1

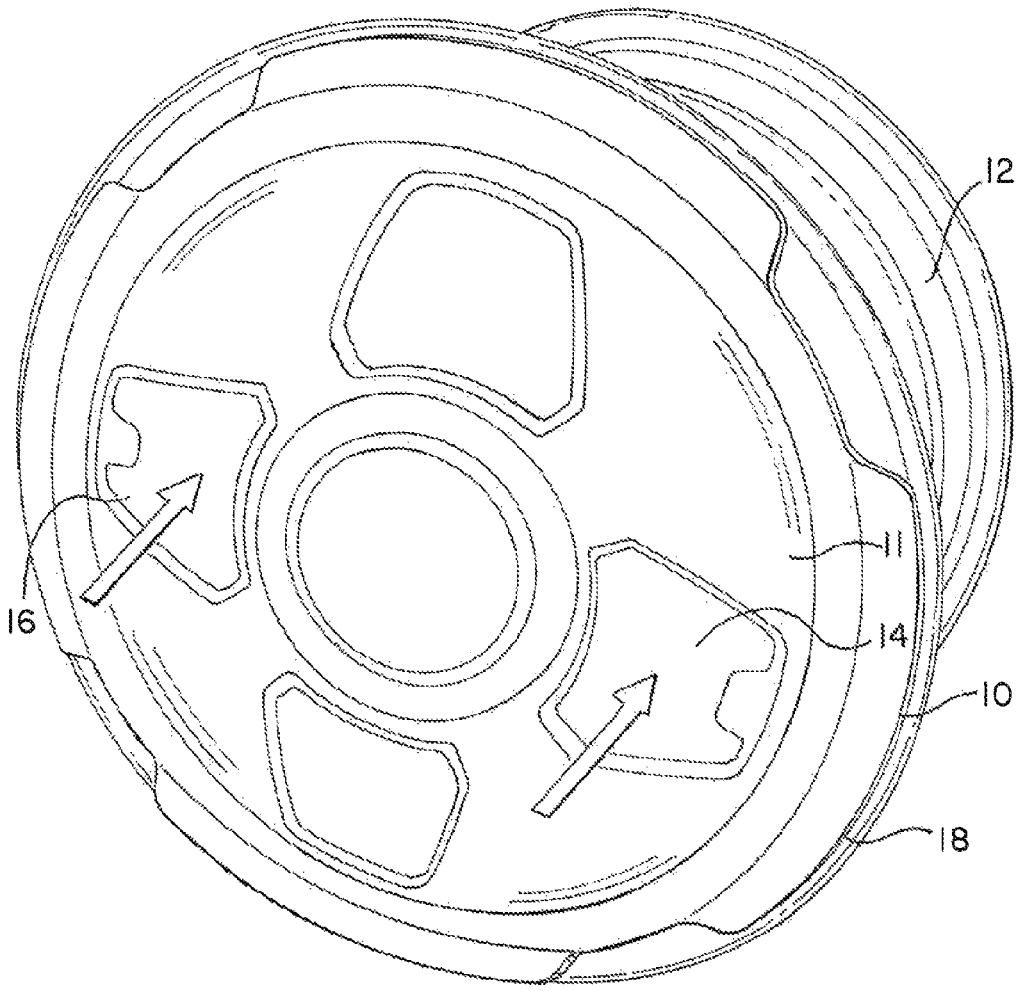


FIG. 2

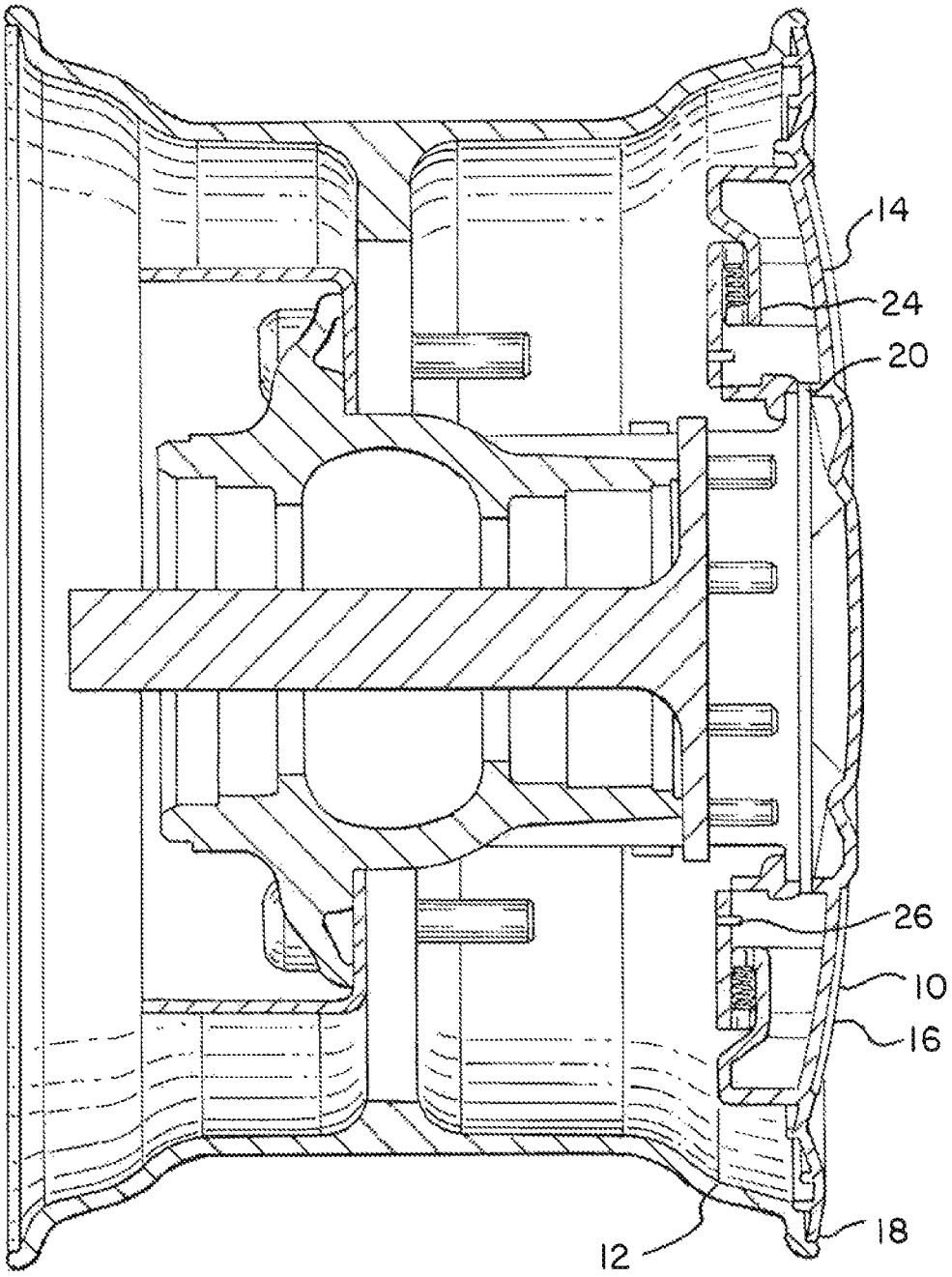


FIG. 3

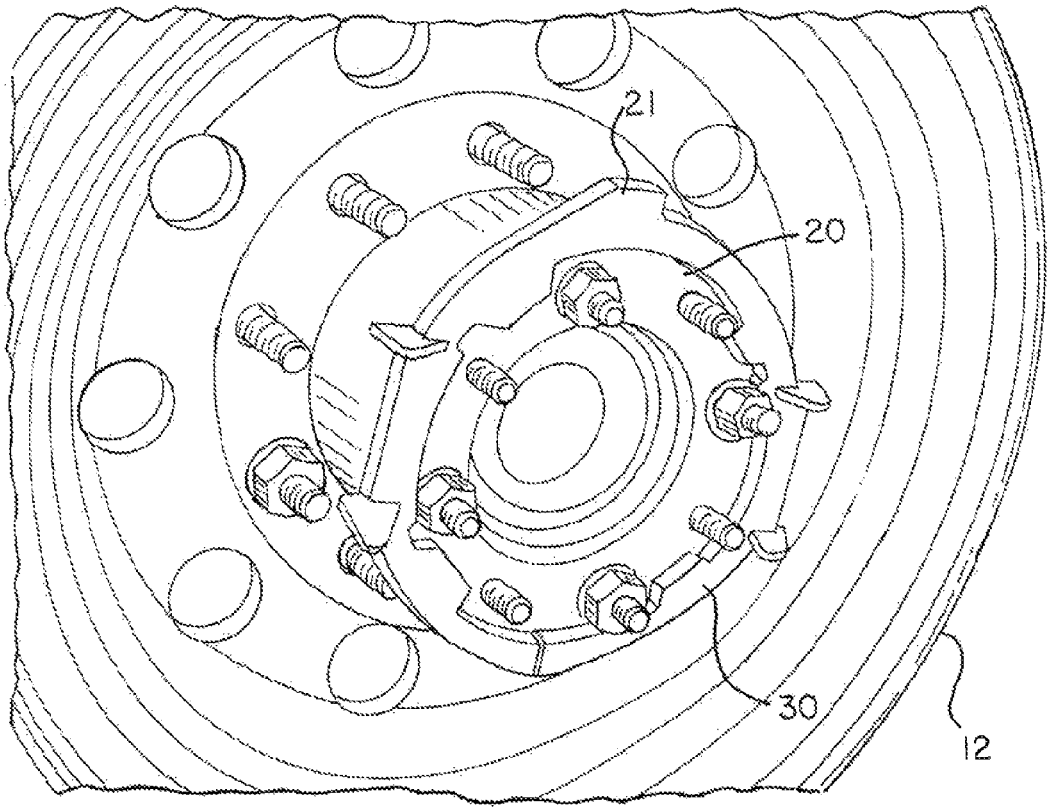


FIG. 4A

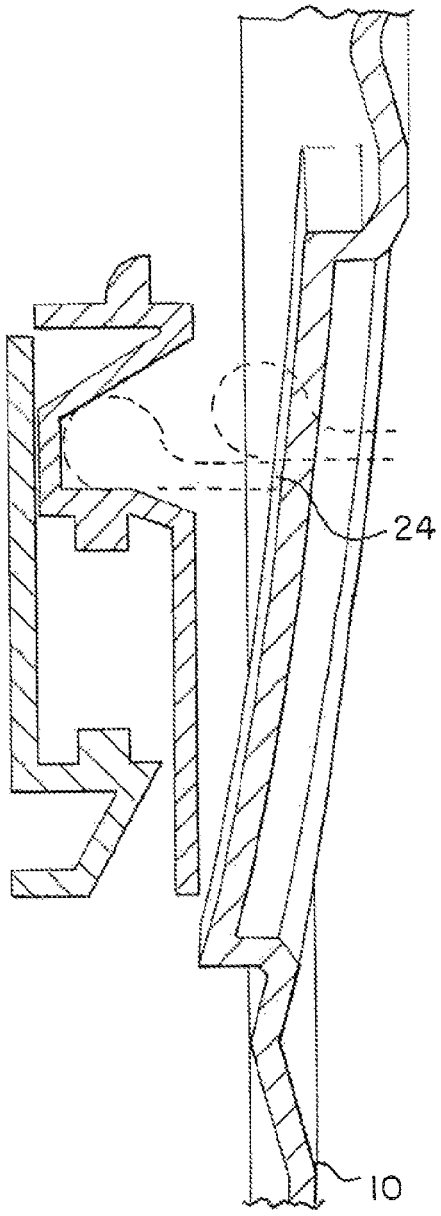
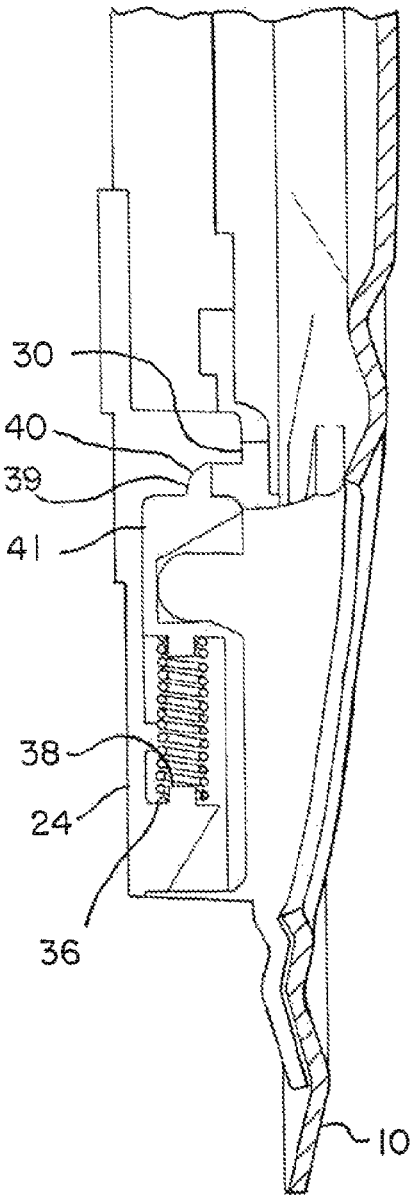


FIG. 4B



TRACTOR/TRAILER WHEEL COVER

BACKGROUND OF THE INVENTION

The present invention relates to a wheel cover for use with a heavy truck and trailer wheel, and in particular, a plastic wheel cover to be mounted on the hub of a heavy truck or trailer wheel.

Such wheel covers are useful in protecting the wheel hub from dirt and debris and hence damage, and also improve the aerodynamic characteristics of the truck.

SUMMARY OF THE INVENTION

The wheel cover of the present invention is for use with heavy trucks and trailers, and is mounted on the wheel hub of such a heavy truck or trailer. The wheel cover is usually comprised of a structural plastic.

The wheel cover includes a ratcheting assembly with an opposing latch which feature contributes to the ease with which the wheel cover can be affixed to the wheel hub.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings,

FIG. **1** is a perspective view of a wheel cover mounted on a wheel in accordance with a preferred embodiment of the present invention affixed to a truck or trailer wheel;

FIG. **2** is a cross section view of a wheel cover mounted on a wheel in accordance with a preferred embodiment of the present invention;

FIG. **3** is a perspective view of a support portion of a wheel cover mounted on a wheel hub in accordance with a preferred embodiment of the present invention;

FIG. **4**A is a cross section view of a support portion of a wheel cover mounted on a wheel hub in accordance with a preferred embodiment of the present invention, and

FIG. **4**B is a detailed cross section view of a support portion of a wheel cover mounted on a wheel hub in accordance with a preferred embodiment of the present invention.

DETAILED DESCRIPTION

Referring now to FIG. **1**, a wheel cover in accordance with an embodiment of the present invention is shown at **10**. Wheel cover **10** is usually comprised of a structural plastic material, such as impact resistant exterior grade thermoplastic olefin, and is a generally circular shaped device having an outer edge **18**. Wheel cover **10** is mounted to wheel **12**, which is usually a heavy truck or trailer wheel which includes a centrally located wheel hub. Wheel cover **10** includes latch elements **14** and **16**, which are located radially outward from the center of wheel cover **10** but radially inward from wheel cover edge **18**.

Referring now to FIG. **2**, a cross section view of a wheel cover in accordance with an embodiment of the present invention is shown.

Wheel cover **10** is seen as a circular device, with an outer surface **11** and circular edge **18**. Wheel cover **10** also includes latch element **14** with ratchet assembly **24**, and latch element **16** with ratchet assembly **26**.

Wheel **12** includes a radially centrally located hub **20**. Wheel cover latch assemblies **24** and **26** are used to connect wheel cover **10** to wheel hub **20**.

Referring now to FIG. **3**, a detailed perspective view of a portion of wheel **12** is shown, with radially centrally located wheel hub **20**. Further, support collar **30** of wheel cover **10** is seen to be affixed to wheel hub **20**. Support collar **30** of wheel cover **10** is seen to be a circular device that is affixed to an outer radial edge of wheel hub **20** near an outer lateral edge of wheel hub **20**. Support collar **30** is usually affixed to wheel hub **20** by a clamp and pivot arrangement **21**. Support collar **30** of wheel cover **10** is usually comprised of a structural plastic material such as an engineered thermoplastic polyamid.

Referring now to FIGS. **4**A and **4**B, detailed partial cross sectional views of wheel cover **10** are shown with one ratchet assembly **24** shown. Ratchet assembly **24** is seen to comprise ratchet stop block **36**, ratchet spring **38**, ratchet operating holder **41** and ratchet extension **40**. When press fit onto wheel **12** that includes support portion **30** of wheel cover **10** mounted onto wheel hub **20**, ratchet extension **40** is forced by ratchet operating holder **41** and ratchet spring **38** into an engaging and supporting relationship with a radial edge surface **39** of support collar **30** of wheel cover **10**. Support collar **30** would have already been installed on wheel hub **20** as shown in FIG. **3**.

What is claimed is:

1. A wheel cover assembly comprising

a generally circular support collar affixed to a wheel hub of a wheel, the support collar having a radial edge,

a main section including an outer surface, an outer edge, and a latch assembly,

the latch assembly comprising a latch, a ratchet block, a ratchet operating holder, a ratchet spring and a ratchet extension,

the wheel cover ratchet extension engaging the radial edge of the support collar when the wheel cover is affixed to the wheel, wherein the support collar includes a pivot and clamp to allow the support collar to be affixed around the wheel hub.

2. The wheel cover of claim **1** wherein

the wheel cover is comprised of a structural plastic material.

3. The wheel cover of claim **1** wherein

the ratchet spring includes one end adjacent the ratchet block,

and the ratchet spring includes another end in engagement with a ratchet operating holder that acts against the ratchet extension.

4. The wheel cover of claim **3** wherein

the ratchet operating holder slides in a radial direction with respect to the wheel hub to push the ratchet extension into engagement with the radial edge of the support collar.

5. A wheel cover assembly comprising

a support collar affixed to a wheel hub of a wheel, the support collar having an outer radial edge,

a main section including an outer surface, a radial outer edge, and a latch assembly,

the latch assembly comprising a latch, a ratchet block, a ratchet operating holder, a ratchet spring and a ratchet extension,

the wheel cover ratchet extension engaging the radial edge of the support collar when the wheel cover is affixed to the wheel, wherein the support collar includes a pivot and clamp to allow the support collar to be affixed around the wheel hub.

6. The wheel cover of claim **5** wherein

the wheel cover is comprised of a structural plastic material.

7. The wheel cover of claim **5** wherein

the ratchet spring includes one end adjacent the ratchet block,

and the ratchet spring includes another end in engagement with a ratchet operating holder that acts against the ratchet extension.

8. The wheel cover of claim **7** wherein

the ratchet operating holder slides in a radial direction with respect to the wheel hub to push the ratchet extension into engagement with the radial edge of the support collar.

9. The wheel cover of claim **5** wherein the latch comprises a portion of the outer surface of the wheel cover, and wherein the latch acts to compress the ratchet spring and thus to move the ratchet extension to allow installation of the wheel cover onto a wheel.

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